



**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of ) ATTN: APPLICATIONS BRANCH  
)  
ROBERT E. BRIGGS and )  
FRED M. TATUM )  
)  
Serial No. )  
)  
Filed: December 15, 1998 ) Atty. Dkt. No.00295.77957

**For: CONSTRUCTION OF PASTEURELLA HAEMOLYTICA VACCINES**

**INFORMATION DISCLOSURE STATEMENT**

The Honorable Assistant Commissioner  
of Patents and Trademarks  
Washington, D.C. 20231

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Dear Sir:

In accordance with 37 C.F.R. §§ 1.97 and 1.98, enclosed is PTO Form-1449 listing documents for consideration by the Examiner during the prosecution of the subject application. All cited art was previously disclosed in parent Application Serial No.08/643,299. Therefore, we are not submitting additional copies of the art.

Consideration of this information is respectfully requested.

Respectfully submitted,

Date: December 15, 1998

By: Sarah A. Kagan

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Registration No. 32,141

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PTO-1449 (Modified)	ATTY'S DOCKET NO. 0295.77957	SERIAL NUMBER
U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	APPLICANT Briggs and Tatum	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT	FILING DATE 12/15/98	GROUP ART UNIT

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE
	4,293,545	10/06/81	Kucera			
	4,335,106	06/15/82	Kucera			
	4,346,074	08/24/82	Gilmour et al.			
	4,388,299	06/14/83	Kucera			
	4,506,017	03/19/85	Kucera			
	4,559,306	12/17/85	Kucera			
	4,626,430	12/02/86	Kucera			
	4,735,801	04/05/88	Stocker et al.			
	4,837,151	06/06/89	Stocker et al.			
	4,888,170	12/19/89	Cyrtiss			
	4,957,739	09/18/90	Berget et al.			
	4,999,191	03/12/91	Glisson et al.			
	5,055,400	10/08/91	Lo et al.			
	5,077,044	12/31/91	Stocker et al.			
	5,165,924	11/24/92	Shewen et al.			
	5,210,035	05/11/93	Stocker			

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EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION YES/NO

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	Lindberg et al., Dev. Biol. Stand., 1995, Vol. 84, p 211-9

EXAMINER	DATE CONSIDERED
EXAMINER: Initial citation if reference was considered. Draw line through citation if not in conformance to MPEP 609 and not considered. Include copy of this form with next communication to applicant.	

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	5,468,485	11/21/95	Curtiss, III			
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## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	Chang et al., "Pneumonic pasteurellosis: Examination of typable and untypable <i>Pasteurella haemolytica</i> strains for Leukotoxin Production, Plasmic Content, and Antimicrobial Susceptibility," <i>Am. J. Vet. Res.</i> , 48(3):378-384 (1987)
	Homchampa et al., "Molecular Analysis of the <i>araA</i> Gene of <i>Pasteurella Multocida</i> and Vaccine Potential of a Constructed <i>araA</i> Mutant," <i>Molecular Microbiology</i> , 6(23):3585-3593 (1992)
	Briggs et al., "Isolation of a Cryptic Plasmic from <i>Pasteurella haemolytica</i> by Electroporation," Abstract, 72nd Annual Meeting of the Conference of Research Workers in Animal Disease, 11/11/91
	Livrelli et al., "Sequence and Molecular Characterization of the ROB-1 $\beta$ -Lactamase Gene from <i>Pasteurella Haemolytica</i> ," <i>Antimicrobial Agents and Chemotherapy</i> , 35(2):242-251 (1991)
	Ricketts et al., "Leukotoxin and Pathogenicity of <i>Pasteurella Haemolytica</i> : Studies with a Leukotoxin Non-Producing Mutant", Abstract, 3rd International Veterinary Symposium, PS 7.19, p. 92 (1993)
	Frey, "Construction of a Broad Host Range Shuttle Vector for Gene Cloning and Expression in <i>Actinobacillus pleuropneumoniae</i> and Other <i>Pasteurellaceae</i> ," <i>Res. Microbiol</i> 143:263-269 (1992)
	Craig et al., "A Plasmic Which Can Be Transferred Between <i>Escherichia coli</i> and <i>Pasteurella haemolytica</i> by Electroporation and Conjugation," <i>J. Gen. Microbiology</i> , 135:2885-2890 (1989)
	Boyce et al., "Plasmid Profile Analysis of Bovine Isolates of <i>Pasteurella haemolytica</i> ," <i>Am. J. Vet. Res.</i> , 47(6):1204-1206 (1986)
	Schwarz, et al., "Detection and Interspecies-Transformation of a $\beta$ -Lactamase-Encoding Plasmid from <i>Pasteurella haemolytica</i> ," <i>Zbl. Bakt. Hyg. A</i> , 270:462-469 (1989)
	Haghour et al., "Plasmids and Resistance to 9 Chemotherapeutic Agents of <i>Pasteurella multocida</i> and <i>Pasteurella haemolytica</i> ," <i>J. Vet. Med. B</i> 34:509-518 (1987)
	Azad et al., "Distinct Plasmic Profiles of <i>Pasteurella haemolytica</i> Serotypes and the Characterization and Amplification of <i>Escherichia coli</i> of Ampicillin-Resistance Plasmids Encoding ROB-1 $\beta$ -lactamase," <i>J. Gen. Microbiology</i> , 138:1185-1196 (1992)

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	5,424,065	6/13/95	Curtiss, III			
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	Hoiseth et al., "Aromatic-dependent <i>Salmonella typhimurium</i> are Non-Virulent and Effective as Live Vaccines," <i>Nature</i> , 291:238-239 (1981)
	Smith et al., "Vaccination of Calves Against <i>Salmonella dublin</i> With Aromatic-Dependent <i>Salmonella typhimurium</i> ," <i>Am. J. Vet. Res.</i> , 45(9):1858 (1984)
	Roberts et al., "Construction and Characterization in vivo of <i>Bordetella pertussis aroA</i> Mutants," <i>Infection and Immunity</i> 58(3):732-738 (1990)
	Ivins et al., "Immunization against Anthrax With Aromatic Compound-Dependent (Aro) Mutants of <i>Bacillus anthracis</i> and with Recombinant Strains of <i>Bacillus subtilis</i> That Produce Anthrax Protective Antigen," <i>Infection and Immunity</i> , 58(2):303-308 (1990)
	Robertson et al., " <i>Salmonella typhimurium</i> Infection in Calves: Protection and Survival of Virulent Challenge Bacteria After Immunization with Live or Inactivated Vaccines," <i>Infection and Immunity</i> 41(2):742-750 (1983)
	O'Gaora et al., "Cloning and Characterization of the <i>serC</i> and <i>aroA</i> Genes of <i>Yersinia enterocolitica</i> , and Construction of an <i>aroA</i> mutant," <i>Gene</i> 84:23-30 (1989)
	Chang et al., "Characterization of Plasmids With Antimicrobial Resistant Genes in <i>Pasteurella haemolytica</i> A1," <i>J. DNA Sequencing and Mapping</i> , 389-97 (1992)
	Rossmann et al., "Characterization and Comparison of Antimicrobial Susceptibilities and Outer Membrane Protein and Plasmic DNA profiles of <i>Pasteurella haemolytica</i> and Certain Other Members of the Genus <i>Pasteurella</i> ," <i>Am. J. Vet. Res.</i> , 52(12):2016-2022 (1991)

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	5,543,312	8/6/96	Mellors et al.			
	5,273,889	12/28/93	Potter et al.			
	5,238,823	8/24/93	Potter et al.			
	4,999,191	3/21/91	Glisson et al.			
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**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

	Tatum et al., "Isolation, Identification, and Cloning of a Non-Palindromic Type II DNA Restriction Endonuclease <i>Pha I</i> , From <i>Pasteurella haemolytica</i> ", Abstract of presentation at American Society for Microbiology, Annual Meeting, May 1993

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	Yang et al., J. Bact., 160(1); 15-21 (1984)
	Matsushima et al., J Bact., 169(5):2298-2300 (1987)
	Marmelstein et al., Appl. Environ. Micro., (59/4): 1077-1081 (1993)
	Wilson, Gene 74: 281 - 289 (1988)
	Marra et al., J. Bact., 171/4:2238 - 2240 (1989)

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	Briggs et al., "Characterization of a Restriction Endonuclease, <i>Phal</i> , from <i>Pasteurella haemolytica</i> Serotype A1 and Protection of Heterologous DNA by a Cloned <i>Phal</i> Methyltransferase Gene", <i>Applied and Environmental Microbiology</i> 60(6):2006-2010 (1994)
	Tatum et al., "Molecular Gene Cloning and Nucleotide Sequencing and Construction of an <i>aroA</i> Mutant of <i>Pasteurella haemolytica</i> Serotype A1", <i>Applied and Environmental Microbiology</i> 60(6):2011-2016 (1994)

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	Old, et al., "Principles of Gene Manipulation", Blackwell Scientific Publications, Oxford, 1989
	Lunnen et al., "Cloning Type-II Restriction and Modification Genes", <i>Gene</i> 74:25-32 (1988)
	Homchampa et al., "Construction and Vaccine Potential of an AroA Mutant of <i>Pasteurella haemolytica</i> ", <i>Veterinary Microbiology</i> 42:35-44 (1994)
	International Search Report for PCT/US94/14095 dated May 2, 1995

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